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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,211

12/16/2004

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EXAMINER

RUTKOWSKI, JEFFREY M

ART UNIT

PAPER NUMBER

2419

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,211	Applicant(s) CHRISTENSEN ET AL.	
	Examiner JEFFREY M. RUTKOWSKI	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

2. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. **Claims 1-6** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claims 1-3** of copending Application No.

10/518,212, hereinafter referred to as ‘212 application in view of Self et al. (US Pat 5,634,043), hereinafter referred to as Self. Although the conflicting claims are not identical, they are not patentably distinct from each other.

4. **Claims 1-6** are essentially the same as **claims 1-3** of the ‘212 application. Except, **claims 1-3** of the ‘212 application do not disclose a redundant architecture. Self teaches the redundant architecture absent from **claims 1-3 and 13** of the ‘212 application by disclosing a “micro-cluster” which consists of a redundant architecture [**figures 17-18**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a redundant

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architecture in **claims 1-3** of the '212 application since mission critical network devices (routers, switches and servers) often have redundant hardware architectures to provide high availability.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 7 and 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukakoshi et al. (US Pat 6,577,634), hereinafter referred to as Tsukakoshi, in view of Civanlar et al. (US Pat 6,078,963), hereinafter referred to as Civanlar.

7. For **claims 7 and 10**, Tsukakoshi discloses expandable router architecture that uses a clustered router [**abstract and figure 1**]. The clustered router includes three routers **12** (router

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components) that are interconnected on one side (input side) via router-to-router switch **13** (means for coupling the router components) and connected to communication terminals **26** on another side (output side) [**figure 2**].

8. Tsukakoshi discloses each router **12** has a Packet Buffer (PB) **45**, memory **42,44** and a processor (CPU) **41,43** [**figure 4**]. Tsukakoshi does not disclose a routing engine is used in each router **12**. Civalanar discloses a router architecture where each router port module makes use of a routing engine **107** [**figure 1**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a routing engine in Tsukakoshi's invention to reduce bottlenecks in a network [**Civalanar, abstract**].

9. Specifically for **claim 10**, Tsukakoshi discloses the use of at least four interconnected routers **12** [**figure 1**]. Since the router switch **13** is abstracted, it is not clear if discrete paths are used to interconnect the routers. Civalanar expands on the teachings of Tsukakoshi by disclosing an architecture that uses discrete paths to interconnect four routing components **103** [**figure 1**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use discrete paths to fully interconnect four routers in Tsukakoshi's invention to provide a switch that can handle higher bandwidth [**Civalanar, col. 3 lines 1-5**].

10. For **claim 11**, Tsukakoshi discloses the use of at least four interconnected routers **12** [**figure 1**]. Since the router switch **13** is abstracted, it is not clear if discrete paths are used to interconnect the routers. Civalanar expands on the teachings of Tsukakoshi by disclosing an architecture that uses discrete paths to interconnect four routing components **103** [**figure 1**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use

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discrete paths to fully interconnect four routers in Tsukakoshi's invention to provide a switch that can handle higher bandwidth [**Civalanar, col. 3 lines 1-5**].

11. **Claims 8-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukakoshi in view of Civanlar, as applied to **claim 7** above, and further in view of Lydon et al. (US Pat 6,680,939).

12. For **claim 8**, the combination of Tsukakoshi and Civanlar do not disclose the use of NxM routing modules. Lydon discloses routing modules that have N inputs and M outputs [**col. 2 lines 64-67**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use NxM routing modules in Tsukakoshi's invention to provide parallelism in the router.

13. For **claim 9**, the combination of Tsukakoshi and Civanlar do not disclose a means for coupling N inputs. Lydon teaches the inputs of the four router modules are connected via bus [**col. 4 line 51**] (said coupling means further comprises means for coupling said N inputs for each one of said at least three broadcast router components to said routing engine for the other ones of said at least three broadcast router components). It would have been obvious to a person of ordinary skill in the art at the time of the invention to interconnect N modules via bus in Tsukakoshi's invention to provide parallelism in the router.

Response to Arguments

14. The argument with respect to Tsukakoshi and Civalanar alone or in combination not disclosing a fully interconnected input side of a router is not persuasive. The claims do not require that the router have a fully interconnected input side or that the router components be

located on the input side of the router. The claims require that certain router components, which could be located anywhere in the router, have fully interconnected inputs.

Terminal Disclaimer

15. The terminal disclaimer filed on 04/11/2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Pat. 7,167,479 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY M. RUTKOWSKI whose telephone number is (571)270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey M Rutkowski
Patent Examiner
01/12/2009

/Hassan Kizou/
Supervisory Patent Examiner, Art Unit 2419